1. The authority, organization, and infrastructure of the veterinary services organization in the region.

a. What veterinary force is available in the region for carrying out regulatory programs for livestock diseases?

There are three categories of veterinarians involved in the statewide testing program: Michigan Department of Agriculture (MDA), United States Department of Agriculture (USDA), and state licensed, federally accredited private practicing veterinarians eligible to conduct testing under a state authorized fee basis program.

b. Are all officers veterinarians?

All testing for tuberculosis is administered by state or federally employed graduate veterinarians or by veterinarians licensed and federally accredited in the state of Michigan.

c. Are any non-veterinary inspectors under the direct supervision of veterinary officers?

All nonveterinarian inspectors are supervised by state or federally employed veterinarians. There are no lay persons involved in a regulatory role outside state or federal employment.

MDA

The Animal Industry Division (AID) has a staff of 70 people under the direction of State Veterinarian and division director, Dr. Joan M. Arnoldi. This includes: 28 veterinarians, 1 veterinary technician, 20 laborers (animal handlers); 1 compliance officer, and 19 office administration and support staff. There are 33 AID staff members assigned to work full-time on the Bovine TB Eradication Project. (Attachment 1)

Listed below are the MDA, AID personnel working full-time on TB eradication

Name	Position
Larry M. Granger, D.V.M.	TB Eradication Mgr., Lansing
Debra Miller	Secretary/Supervisor, Lansing
Cathleen Conley	General Office Asst., Lansing
Jennifer Finch	Data Coding Operator, Lansing
Joe Wolfe	Data Coding Operator, Lansing
Carrie Fata	General Office Asst., Lansing
Daniel Graham, D.V.M.	Regional Supervisor, Atlanta
Beth Hall	Regional Secretary, Atlanta
Nate Plumm	Data Coding Operator, Atlanta
Shelley Bennett Maas, D.V.M.	Veterinarian P11, Atlanta
Dave Minier, D.V.M.	Veterinarian P11, Atlanta
Daniel Robb, D.V.M.	Veterinarian P11, Atlanta
Sara Ross	Veterinarian Tech, Atlanta

James Bahling	Laborer 6, Atlanta
John Bittner	Laborer 6, Atlanta
Troy Cmach	Laborer 6, Atlanta
Gary Gawel	Laborer 6, Atlanta
Dennis MacArthur	Laborer 6, Atlanta
Bruce Oliver	Laborer 6, Atlanta
Peggy Powell	Laborer 6, Atlanta
James Redmond	Laborer 6, Atlanta
Ralph Rosebrugh	Laborer 6, Atlanta
Roger Stelzer	Laborer 6, Atlanta
Diane Talicska	Laborer 6, Atlanta
Miranda Trader	Laborer 6, Atlanta
Ray Faulman	Laborer 6, Traverse City
Molly Kass	Laborer 6, Escanaba
Mark McCorkle	Laborer 6, Grand Rapids
Jeff Schaner	Laborer 6, Saginaw
Ryan Starkweather	Laborer 6, Grand Rapids
Jeff Walker	Laborer 6, Saginaw
Boyd Wallace	Laborer 6, Saginaw
Mike Wigman	Laborer 6, Grand Rapids

Other AID staff work a portion of their time on the bovine tuberculosis issue. All are available to commit as much of their full-time position as necessary to the Bovine TB Eradication Project.

USDA, ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS), VETERINARY SERVICES (VS)

USDA, APHIS, VS and MDA, AID work cooperatively in the Bovine Tuberculosis Eradication Program. Program planning, development, implementation, investigation, and enforcement are accomplished by joint effort of these two regulatory agencies. Veterinary Services personnel are under the direction of Dr. Reed Macarty, Area Veterinarian in Charge (AVIC).

The following USDA, APHIS, VS personnel are assigned to work full-time on the program. (Attachment 2)

Name	Position
Michael Stine, D.V.M.	AAVIC
Teresa Houlihan	Secretary
Diane Hickens	Office Assistant
Colleen Bruning-Fann, D.V.M.	DTE
Larry Judge, D.V.M.	DTE
Charles Hench, D.V.M.	VMO, GS-12, Atlanta
Leslie Cmach, D.V.M.	VMO, GS-12, Atlanta
Teri Drean	VMO, GS-12, Atlanta
Gary Hart, D.V.M.	VMO, GS-12
James Earl, D.V.M.	VMO, GS-12
Tom Schwarck, D.V.M.	VMO, GS-12
Lori Harms, D.V.M.	VMO, GS-12, Escanaba
Phyllis Rayca	AIC, Atlanta
Tamara Chojawacki	AHT, GS-07, Atlanta
Herb Trader	AHT, GS-08, Atlanta
S. English	AHT, GS-08, Atlanta
Kim Duffiney	AHT, GS-08, Saginaw

Michelle Williams	AHT, GS-08, Saginaw
Sean Brown	AHT, GS-08
Amy Tolan	AHT, GS-08
Kristi Cryer	AHT, GS-08
Doug Hoffman	AHT, GS-08
Jamie Lawrence	AHT, GS-08
Patricia Lipinski	AHT, GS-08
Rhett Hurley	AHT, GS-08
Sean Brown	AHT, GS-08
Barb Marshell	AHT, GS-08
James Beck	AHT, GS-08
Jeff Newsom	AHT, GS-08
Christi Chapman	AHT, GS-08
Elizabeth Gregory	AHT, GS-08
Kris Zmitko	AHT, GS-08

Other USDA, APHIS, VS staff may work a portion of their time on the bovine tuberculosis issue.

d. What are the required procedures for specimen collection?

All bovine tuberculosis testing and tissue specimen collections are performed according to 9 Code of Federal Regulations (CFR), the Uniform Methods and Rules (UM&R) for Bovine Tuberculosis Eradication and the Michigan Animal Industry Act, P.A. 466 of 1988, as amended. (Attachment 3.)

e. What diagnostic procedures and techniques are routinely followed for each disease agent of concern?

Diagnostic procedures and techniques routinely followed in Michigan for bovine tuberculosis follow the state-federal cooperative program for Eradication of Bovine Tuberculosis in Cattle and Eradication of Bovine Tuberculosis in Cervidae.

Caudal fold testing may be performed by state and federal animal health veterinarians and Michigan licensed, federally accredited veterinarians are allowed to officially caudal fold tuberculosis test cattle for private fee. All caudal fold and single cervical tuberculosis suspect cattle are reported to either state or federal animal health officials according to procedures in 9 CFR, the UM&R for Eradication of Bovine Tuberculosis and state law.

State and federal animal health veterinarians conduct comparative cervical tests on all bovine tuberculosis suspects reported by private veterinary practitioners within the time frame allowed by the appropriate UM&R.

If suspect animals are slaughtered, appropriate biosecurity measures are followed and diagnostic tissues are harvested either at the Michigan State University (MSU), Animal Health Diagnostic Laboratory (AHDL) or at a USDA, Food Safety and Inspection Service (FSIS) inspected slaughter establishment and forwarded to

USDA, National Veterinary Services Laboratory (NVSL) through Dr. Reed Macarty, AVIC.

All reactor animals are sent to MSU, AHDL where diagnostic tissues are harvested and forwarded to USDA, NVSL. The carcasses are incinerated at MSU, AHDL or rendered.

The herds where suspect comparative cervical test animals are found are quarantined by the state according to the UM&R. The suspect animals remain quarantined and a second comparative cervical tuberculosis test is conducted 60 days later. The MDA Director orders destruction of the suspect and the owner may apply for indemnification.

If the suspect animal is negative on the second comparative cervical test, the quarantine on the herd is released. If the suspect animal is suspect or reactor on the second comparative cervical test, the designated tuberculosis epidemiologist classifies the animal as a reactor, and the Director orders the reactor destroyed.

Comparative cervical suspect animals that are destroyed are sent to MSU, AHDL under official seal on a VS 127. Tissues are collected and sent to NVSL. The herds where these suspects originated remain under quarantine. NVSL conducts laboratory analysis including histopathology, polymerase chain reaction testing (PCR), and culture.

If NVSL reports that the tissues are not compatible for bovine tuberculosis or PCR is not compatible for *M. bovis,* and no gross lesions consistent with bovine tuberculosis were seen at necropsy, the herd quarantine is released with the understanding that cultures on the tissues may still be conducted.

However, if NVSL reports that the tissue is tuberculosis compatible or suggestive or that acid fast organisms have been seen and PCR is *M. bovis* compatible, the herd quarantine remains until a determination of affected herd status is made by the USDA Area Veterinarian in Charge, the state veterinarian, and AHDL director.

f. What laws, regulations, and policies are in effect? For example, is waste feeding permitted and, if so, what restrictions apply (such as cooking the waste to specific temperatures and durations)?

P.A. 466 of 1988, as amended, Animal Industry Act (Attachment 3)
Regulations for P.A. 466 of 1988, as amended, the Animal Industry Act (Attachment 4)
P.A. 239 of 1982, as amended, Bodies of Dead Animals (Attachment 5)
Regulations for Act 239 of 1982, as amended, Bodies of Dead Animals (Attachment 6)
P.A. 284 of 1937, as amended, Licensing Livestock Dealers Act (Attachment 7)
Regulation No. 128, Records Required of Livestock Dealers (Attachment 8)
Bovine TB Eradication Project Strategic Plan (Attachment 9)
Zone Designations (Attachment 10)
Establishment of "High Risk Areas," "Potential High Risk Areas" and Release of Quarantine Order No. 1998-02 for Bovine Tuberculosis (Attachment 11)
Establishment of "High Risk Area" – Oscoda County (Attachment 12)
Establishment of "High Risk Area" – Emmet County (Attachment 13)

TB Zone Designation Map (Attachment 14)

Normal Agricultural Practices (Attachment 15)
Reportable Animal Disease List (Attachment 16)
Governor John Engler's Executive Directive No. 1998-1 (Attachment 17)
Michigan DNR Wildlife Conservation Orders (Attachment 18)
DNR Legislation/Amendments Affecting Wildlife (Attachment 19)

g. What security measures are in place at ports of entry to control importation of materials that might carry disease agents of concern?

During November and December of 2001, MDA and USDA staff began educating producers at Michigan licensed auction markets of the livestock testing, movement, and identification requirements. Since January 2002, strict enforcement of these regulations has required animals presented for sale which do not meet tuberculosis testing and official identification requirements to be sold for slaughter only. In situations where an animal's destination is in question, MDA or USDA personnel have followed up to verify that the animal was slaughtered within 5 days.

The owner's name, address and information regarding animals are documented by MDA/USDA inspectors and sent to the appropriate regional office for further follow-up.

Animal identification is mandated and enforced with MDA or USDA staff recording first time violators and bringing them into compliance once the animals arrive at licensed auction markets. Michigan State Police, Motor Carrier Division have made traffic stops of vehicles transporting livestock throughout Michigan and have not found repeat violations.

Enforcement of intrastate movement requirements has been progressive on a graduated, education-based enforcement protocol since January of 2002. Again, to date, this method of enforcement has been successful and has had few repeat violators. MDA and USDA staffs have conducted two (2) movement investigations and have found that animals were moved in the proper channels and had the proper testing required. MDA and USDA field staffs were able to verify the final destination or location of these animals in question. (Attachment 35)

The compliance unit has also been working continuously with the Mackinac Bridge Authority, the Michigan State Police, Motor Carrier Division and with local sheriff departments to increase surveillance of livestock movements throughout Michigan. The Mackinac Bridge Authority has monitored livestock movement north into the Upper Peninsula since July of 2001. This information has allowed the MDA to build a monitoring system to verify when livestock is moving to the Upper Peninsula and to have MDA personnel to check testing and identification requirements of livestock moving north into the Upper Peninsula.

Livestock movement inspection forms are used by law enforcement agencies to report livestock movement to the MDA for enforcement. This combined with having MDA or USDA staff at Michigan licensed auction markets every week has enabled MDA to enforce the testing and movement requirements. As we move further into the year and repeat offenders are found, increased penalties will be used and help to gain further compliance.

2. Disease status--i.e. is the restricted disease agent known to exist in the region? If "yes," at what prevalence? If "no," when was the most recent diagnosis?

a. For each relevant hazard, is the pest or disease agent known to exist in the region?

Bovine tuberculosis is known to exist in wild, white-tailed deer in the counties of Alcona, Alpena, Antrim, Crawford, Emmet, Iosco, Mecosta, Montmorency, Osceola, Oscoda, and Presque Isle. Bovine tuberculosis is not known to exist in livestock (cattle, goats, and bison, and captive cervids) except in Alcona, Alpena, Emmet, Montmorency, Oscoda, and Presque Isle Counties. There have been no cases of livestock infected with tuberculosis in the Disease Free Zone.

DNR has conducted an extensive statewide bovine tuberculosis surveillance program on wild white-tailed deer and elk. (Attachment 20)

b. If yes, at what prevalence?

Year	Number and Type(s) of Herd	Number of Animals TB-Positive [1] /Total Number in Infected Herds	County
1994	--	--	--
1995	Wild, White-tailed Deer	18 / 4037	Statewide
1996	Wild, White-tailed Deer	56 / 4, 967	Statewide
1997	Wild, White-tailed Deer 1 deer (captive)	73 / 3,720 14 / 262	Statewide Presque Isle
1998	Wild, White-tailed Deer 1 beef	78 /9,057 1 / 20	Statewide Alpena
1999	Wild, White-tailed Deer 3 beef	58 / 19,500 13 / 415	Statewide Alcona Presque Isle
2000	Wild, White-tailed Deer 5 beef[2] 2 dairy	53 / 25,858 9 / 914	Statewide Alcona, Alpena, Montmorency Presque Isle
2001	Wild, White-tailed Deer 8 beef[3]	60 / 24,275 42 / 431	Statewide Alcona Alpena
2002	4 beef 1 dairy	5 / 214	Alpena, Emmet, Oscoda

[1] Positive on histology and/or culture.
[2] Associations exist among four of these herds and one of the 2001 beef herds.
[3] Associations exist among three of these herds.

c. If no, when was the most recent diagnosis or detection?

See response in 2b.

d. What breeds or species were affected?

- Bovine tuberculosis has been detected in one captive cervid operation that had fenced in wild white tailed deer as a legal taking in December 1997.
- Bovine tuberculosis in livestock has been found in cattle. (Three dairies and 21 beef herds)
- There is a reservoir of bovine tuberculosis in the wild, white-tailed deer.
- Bovine tuberculosis is known to exist in species summarized in the Bovine Tuberculosis Survey Results & Summary. (Attachment 21)

d. How many cases were diagnosed and reported?

See response in 2b.

f. Is reporting the pest or disease agent required in the region?

Disease caused by *Mycobacterium bovis* is a reportable disease in the state of Michigan. Under Public Act 466 of 1988, as amended, any person who has suspicion or knowledge of a reportable disease must immediately report that fact to the MDA. (Attachment 3) All reports of suspicion of disease or suspect tuberculosis test results are immediately assigned for follow-up to state or federal veterinarians trained in the diagnosis and control of tuberculosis, and diagnostic procedures followed as outlined in the UM&R for Bovine Tuberculosis Eradication.

g. If the pest or disease agent was present and subsequently eradicated, what methods were used for eradication?

M. bovis was eradicated in Michigan's bovine population prior to 1979. The last herd known to be infected with *M.* bovis was a dairy in 1974. Michigan was accredited bovine tuberculosis free in cattle on December 1, 1979, and retained that status until August 13, 1998.

Michigan became Non-Modified Accredited in June 2000 as an entire state. In November 2000, Michigan was assigned Modified Accredited status under new USDA standards.

In the summer of 2001, the MDA, in cooperation with the U.S. Food and Drug Administration and the USDA, submitted a proposal to the 2001 National Conference on Interstate Milk Shipments (NCIMS) to update the terminology in the Grade "A" Pasteurized Milk Ordinance for bovine TB risk classification and to allow alternative bovine TB testing protocols which are risk-based and would most effectively utilize resources to assure milk safety. The NCIMS delegates voted in support of this proposal which went into immediate effect. (Attachment 34)

The methods used to eradicate *M. bovis* were the state/federal cooperative program for tuberculosis eradication in effect at that time.

Bovine tuberculosis is difficult to prevent or treat in wild deer. There is no effective vaccine for disease prevention and no effective medication for treatment. The goal of the bovine TB eradication effort is to eradicate bovine TB from all species, livestock and wild, white-tailed deer, in Michigan. The wildlife strategy consists of deer management actions (Attachment 18) and wildlife disease surveys. Deer management actions (ban on feeding and increased deer harvest) are used to eliminate bovine TB in wildlife while wildlife disease surveys are used to monitor the apparent prevalence of bovine TB and the geographical spread of the disease. Large scale feeding of wildlife no longer occurs anywhere in Michigan.

h. What geographic and environmental characteristics of the exporting region may influence the prevalence of the pest or disease agent?

The prevalence of *M. bovis* in the wild, white-tail deer population in the five-county area of Alpena, Alcona, Montmorency, Oscoda, and Presque Isle represents a risk for livestock and other species in the area. This reservoir host may be the source of infection for other species although studies are ongoing to determine whether other species may also represent a reservoir. (Attachments 22 and 23)

3. The status of adjacent regions with respect to the agent.

a. For each relevant hazard, is the pest or disease agent known to exist, or has it existed previously, in any region adjacent to the region proposing the trace?

b. If yes, at what prevalence? If no, when was the most recent diagnosis.

In the Disease Free Zone, Michigan had a high incidence of bovine tuberculosis skin test reactors in the 1950s, which accounted for about 30 percent of the total found in the nation. Most of these reactors were found to be negative for bovine tuberculosis when specimens were collected and submitted for culture to the USDA, MDA, and MSU tuberculosis research project. Bovine tuberculosis was diagnosed in a captive deer herd in southwest lower Michigan and extensive testing, slaughter, and treatment with isoniazid was utilized in the 1960s.

c. When was the most recent diagnosis?

In the part of Michigan designated as the Disease Free Zone, Michigan's last infected cattle herd was diagnosed in 1974 before the state was classified by USDA APHIS as Bovine Tuberculosis Accredited Free on December 1, 1979. In 1993, an individual cull cow was diagnosed as *M. bovis* infected at slaughter and was traced to a dairy farm in Isabella County. Epidemiologic investigation and follow-up testing of over 8000 cattle showed no other infected animals or spread of bovine tuberculosis.

In 1994, a captive elk in Montcalm County was confirmed with *M. bovis*. The entire herd of 26 head was depopulated. Epidemiology and traceback testing as determined necessary by federal tuberculosis epidemiologists and state animal health officials in compliance with the UM&R for Tuberculosis Eradication in Cervidae were accomplished. No further bovine tuberculosis infected animals were found.

d. Are there any relevant factors about the adjacent regions that should be taken into account (e.g., size, distance from the adjacent border to affected herds or animals)?

All herds of livestock found affected with tuberculosis are well within the Infected Zone except the three most recent affected herds. An Oscoda County beef herd in Surveillance Zone and two Emmet County herds (one beef and one dairy) in the Disease Free Zone are known to be affected.

The small beef herd in Oscoda County is epidemiologically linked to a known affected herd in the Infected Zone through livestock movement (bull) between herds and is not likely to represent infection due to exposure to the wildlife reservoir. The Michigan Department of Agriculture has designated Oscoda County a High Risk Area (Attachment 12) in order to require annual whole herd testing for three years, rather than biennial testing for surveillance of herds in this county. Movement restrictions are the same in the Infected and Surveillance Zones.

The beef and dairy herds in Emmet County are near the location a positive deer was found in 2000. The MDA has also designated Emmet County a High Risk Area (Attachment 13) in order to require annual whole herd

testing for three years.

For these reasons MDA has chosen not to increase the size of the Infected Zone. (Attachment 14)

Lake Huron borders the Infected Zone to the east and north while the southern border of the Infected Zone is a large expanse of national forest with low deer density and few livestock enterprises. The Surveillance Zone separates the Infected Zone from the Disease Free Zone.

4. The extent of an active disease control program, if any, if the agent is known to exist in the region.

a. What is the extent of an active disease control program, if any, is the pest or disease agent is known to exist in the region, or recently existed in the region?

All herds in the state of Michigan are required to be whole herd tested by December 31, 2003, according to requirements of PA 466 of 1988, as amended.

> Section 9(20) All cattle and goat herds located in any area outside a high-risk area or a potential high-risk area in this state shall be whole herd bovine tuberculosis tested between January 1, 2002 and December 31, 2003.

PA 466 of 1988, has recently been amended to allow the MDA director to establish zones that specify animal identification, testing and movement requirements. These zones became effective on March 10, 2002, (Attachment 10) and are outlined here.

Infected Zone - includes Alcona, Alpena, Montmorency, and Presque Isle Counties. (Colored yellow on the Zone/Area Designation Map – Attachment 14.)

Animal Identification

- Official identification is required on all domestic livestock that move from any premises. The use of electronic identification will be strongly encouraged.

Surveillance Herd Testing Requirements

- Annual whole herd testing is required of all herds for surveillance, except that surveillance testing is not required for terminal operations (Attachment 24).

Movement Testing Requirements

- The herd must have met the annual testing requirement for surveillance testing.
- An individual animal test with negative results is required within 60 days prior to movement for breeding livestock and sexually-intact feeders, if movement occurs after 6 months from the date of the annual whole herd test.
- No additional testing is required of individual animals moved directly to slaughter, to a terminal operation (Attachment 24), or if originating from an accredited herd.

Movement Permit Requirements

- A movement permit is required to move livestock from any premises within the Infected Zone, unless moving directly to slaughter.

Surveillance Zone - includes Cheboygan, Crawford, Iosco, Ogemaw, Oscoda, and Otsego Counties. (Colored Green and Orange on the Zone/Area Designation Map – Attachment 14.)

Animal Identification

- Official identification is required on all domestic livestock that move from any premises.

Surveillance Herd Testing Requirements

- Biennial whole herd testing is required of all herds for surveillance, except that surveillance testing is not required at terminal operations (Attachment 24).

Movement Testing Requirements

- The herd must have met the biennial testing requirement for surveillance testing.
- An individual animal test with negative results is required within 60 days prior to movement for breeding livestock and sexually-intact feeders, if movement occurs after 6 months from the date of the biennial whole herd test.
- No additional testing is required of individual animals moved directly to slaughter, to a terminal operation (Attachment 24), or if originating from an accredited herd.

Movement Permit Requirements

- A movement permit is required to move livestock from any premises within the Surveillance Zone, unless moving directly to slaughter.

Disease Free – includes all counties outside the Infected and Surveillance Zones.

Animal Identification

- Official identification is required on any domestic livestock that move from any premises.

Surveillance Herd Testing Requirements

All herds located in Antrim, Arenac, Charlevoix, Emmet* Gladwin, Kalkaska, and Roscommon counties (colored Blue and Red on the Zone/Area Designation Map – Attachment 14) are required to have completed two whole herd tests performed before the December 31, 2003, statewide deadline for whole herd testing.

*On July 22, 2002, Emmet County was declared a High Risk Area and will be required to test annually for at least three years.

- Those herds having completed a whole herd test once must be tested a second time upon or near the herd test anniversary date in 2002.

- Those herds never having been whole herd tested must be tested within the year 2002 with a second test to follow on the 2003 anniversary date.

- Those herds having completed two whole herd tests within the three-year period of January 1, 2000, through December 31, 2002, are exempt from further surveillance testing under this provision.

In addition, P.A. 466 of 1988, as amended, Section 9(22) also restricts movement of animals in the entirety of the Disease Free Zone:

> (22) Subject to subsection (24), cattle and goats originating in an area not designated as a high-risk area moving intrastate shall meet at least 1 of the following until the zone, area, or the entirety of the state from which they originate receives tuberculosis-free status from the United States department of agriculture or under other circumstances as approved by the director:
> (a) Originate directly from a herd that has received an official negative whole herd bovine tuberculosis test within the 24 months before the intrastate movement.
> (b) Has received an individual official negative bovine tuberculosis test within 60 days before the intrastate movements.
> (c) Has originated directly from an accredited bovine tuberculosis-free herd as defined in title 9 of the code of federal regulations and the bovine tuberculosis eradication: uniform methods and rules, effective January 22, 1999, approved by veterinary services of the United States department of agriculture, and all amendments to those publications thereafter adopted pursuant to rules that the director may promulgate.

The state of Michigan is instituting a plan for surveillance of herds in the Disease Free Zone. This random and representative sampling of whole herds tested is more likely to detect area spread of this disease than mandated producer testing for movement of individual animals offered for sale. (Attachment 25) A feature of this proposal is a risk survey that will help determine management risk factors. (Attachment 26)

CAPTIVE CERVIDAE

Michigan has applied for accredited free status under the National Tuberculosis Eradication Program.

b. What epidemiologic investigations are done to trace the source of infection?

Epidemiologic investigations are initiated when animals with the presence of lesions grossly or histologically compatible with tuberculosis are found, or when positive culture results are received confirming the presence of *Mycobacterium bovis* in a livestock species. If *M. bovis* is confirmed in any cattle, goats, or captive cervidae, epidemiologic investigations are conducted according to the UM&R for Bovine Tuberculosis.

All herds within Michigan which have sold or received animals from the affected herd, contact herds, or those herds considered at risk for contracting or contributing tuberculosis are scheduled for tuberculosis testing by state or federal veterinarians. Public Act 466 of 1988, as amended, provides authority for the Director to examine or collect diagnostic specimens from any animal suspected to be affected by a reportable disease.

High Risk and Potential High Risk Areas are defined terms in P.A 466, as amended, Section 11(a) and (c) respectively. A High Risk Area is an area designated by the director where bovine tuberculosis has been diagnosed in livestock while a Potential High Risk Area is an area designated by the director where the disease has been diagnosed in wild animals only. Both designations serve to invoke the director's authority to test livestock herds for area surveillance.

There have been three potential High Risk Areas designated. (Attachment 27) All livestock herds within a 10-mile radius around infected deer are and have been tested within six months of officially designating the area a Potential High Risk Area. When an area is designated a High Risk Area, all livestock herds are tested annually for at least a 36-month period after which the designation can be removed. Emmet and Oscoda Counties are currently designated High Risk Areas. Alcona, Alpena, Montmorency, and Presque Isle Counties were initially designated as a High Risk Area, but are now designated as the Infected Zone, which has the same testing requirements as a High Risk Area.

These investigations include:

- Obtaining producer records on all movements
- Reviewing state and federal tuberculosis testing and movement certificates
- Records on partnerships or other farm locations
- Investigations of records at saleyards or with livestock dealers
- Area surveys
- All other information deemed appropriate by epidemiologists

All states and countries with herds which have sold to or purchased animals from the affected herd, or have had other contact with animals in the affected herd are contacted by MDA and USDA regarding such movements or contacts. Information regarding animals exposed through congregation points such as auction saleyards or exhibitions are obtained from the saleyard or exhibition authority.

Tuberculosis testing of all traceback, traceforward, and other contact herds is conducted until MDA and USDA epidemiologists determine that further epidemiologic investigation is not needed.

c. Are infected or exposed animals or premises quarantined? If so, for how long?

The director has authority to quarantine under P.A. 466 of 1988, as amended, section 12. (Attachment 3)

Any herds, which harbor animals suspected of being infected with tuberculosis are immediately, placed under a movement quarantine restriction until the tuberculosis status of the herd can be established. When reports of suspect animals are reported by private veterinarians upon screening testing, the suspect herd is quarantined by state or federal animal health officials.

All infected and exposed animals within a herd which is confirmed to be affected with tuberculosis remain under quarantine until the entire herd is depopulated and all requirements of the appropriate UM&R are followed. Contact herds may also be quarantined and depopulated.

If depopulation is not possible, affected herds remain under quarantine until all reactor animals have been removed and the herd undergoes tuberculosis testing as outlined in UM&R for Bovine Tuberculosis Eradication. All testing in affected herds is conducted by state or federal veterinarians.

Herds which contain exposed animals previously sold from an affected herd are quarantined, and the exposed animal(s) depopulated and submitted for confirmatory testing. The herd may be released from quarantine if the exposed animal(s) is found negative for tuberculosis and the herd receives a complete negative tuberculosis test. If the exposed animal is not depopulated, the rest of the herd is handled as outlined in the UM&R for

Bovine Tuberculosis Eradication.

d. Are affected premises monitored, and if so, how?

Any premises under state quarantine is monitored by state and federal animal health officials assigned to the premises and appropriate reports are written concerning the visit. The visits are to monitor and assure compliance with the quarantine, monitor animal identification, and enforce biosecurity measures.

e. What tests are performed prior to releasing of the quarantine?

Tuberculosis testing is performed by state or federal personnel at an interval as outlined in the UM&R for Bovine Tuberculosis Eradication, or as otherwise deemed necessary by the Department in conjunction with the state and regional tuberculosis epidemiologist. This testing include(s) all susceptible livestock species on the premises.

f. What procedures are used to clean up affected premises?

If a herd is depopulated, the owner cleans the premises under the direction of appropriate state and federal animal health officials. After the cleaning has been accomplished and approved by the appropriate animal health officials, the inanimate objects and surfaces which were exposed to the animals in the depopulated herd are disinfected by state or federal animal health officials. A high-pressure power sprayer is used which contains a disinfectant approved by USDA to disinfect facilities previously exposed to *M. bovis*. Any facilities, or portions of facilities, which cannot be disinfected remain vacant for a period of not less than one year prior to reuse or animals are tested on an accelerated schedule.

Reactor animals which are shipped to MSU, AHDL by truckers contracted by MDA, or by the owner of the cattle, are escorted to the facility by state or federal animal health officials, or are sent on an officially sealed truck or trailer. All vehicles used for such transport are disinfected by state or federal animal health officials using a high-pressure power sprayer and approved disinfectant.

There have been two dairy herds not depopulated as affected herds in the Infected Zone. Both herds were tested frequently according to a herd plan with removal of caudal fold responders as reactors until the herds tested negative. Both herds have been released from quarantine.

g. What treatment regimes are followed?

No treatments are used in control of *Mycobacterium bovis*.

h. What breeding practices are followed?

If a livestock herd is quarantined because of *M. bovis*, Public Act 466 of 1988, as amended (see Attachment 3), allows for the Director of MDA to direct the appropriate inventory, segregation, care, and feeding of livestock to prevent the breeding of livestock in a quarantined herd.

i. If depopulation is used, how are the carcasses disposed of (are they salvaged at abattoirs)?

All animals ordered depopulated for the presence of *Mycobacterium bovis* are disposed of in one of the following ways (Attachments 5 and 6):

1) Submission to an approved diagnostic laboratory for tuberculosis testing and subsequent incineration.
2) Transport and disposal at a landfill approved by the Michigan Department of Environmental Quality (DEQ) to handle dead animals.
3) Burial on site in a manner which will not allow exposure to other animals or contamination of facilities.
4) Burial at an offsite location which will not allow exposure to other animals or contamination of facilities.
5) Rendering.
6) Slaughter at a USDA/FSIS inspected facility.

j. Is indemnity paid on destroyed animals? Yes

Effective February 14, 2002, USDA became responsible for paying fair market value for all livestock that are suspect, exposed, infected, or reactor classification for bovine tuberculosis. Any livestock that are given a classification under the tuberculosis eradication program may make a claim for indemnity at 100 percent of the appraised fair market value, not to exceed $3,000 (less any salvage value).

Prior to February and concurrent with these changes, under Public Act 466 of 1988, as amended, the director of the MDA may allow indemnification for animals ordered destroyed for the control or eradication of a disease or condition of livestock. Indemnification is based upon 100 percent of the fair market value of that type of livestock or domestic animal on the date of the appraisal and marketable for the purpose for which the livestock or domestic animal was intended, not to exceed $4,000 for each livestock or domestic animal.

k. Have premises, thought to have been cleaned up, later been found to still be infected?

There is one premises, an outdoor beef operation in the Infected Zone, which has been depopulated as an affected herd. The premises was cleaned and disinfected, repopulated with imported cattle, and has been found to be affected with bovine tuberculosis six months later. We are awaiting RFLP to determine the DNA similarity with the northeast Michigan strain of *M. bovis.*

5. The vaccination status of the region. When was the last vaccination? What is the extent of vaccination if it is currently used, and what vaccine is being used?

a. Is the ownership and use of vaccine allowed?
b. When was the last vaccination?
c. What is the extent of vaccination if it is currently used?
d. What types of vaccine (live, modified live, killed) are used?
e. Who may vaccinate (herd owners, veterinarians, etc.)?
f. Are records kept in the use of vaccine?
g. Who produces the vaccine?
h. Is the administration of serum permitted? If so, by whom and under what conditions?

An approved bovine tuberculosis vaccine for use in animals is not currently available or licensed by USDA, APHIS. Under Public Act of 466 of 1988, as amended, the director of the MDA may ". . . pursue restrictions of the distribution and use of veterinary biologics when the director determines that such restrictions are necessary for the protection of domestic animals or the public health, interest, or safety. . . " [MCL 287.743 Sec. 43 (3)] (Attachment 3). This authority may be implemented to regulate vaccine usage if such a vaccine is developed.

6. The degree to which the region is separated from adjacent regions of higher risk through physical or other barriers.

a. To what degree is the region separated from regions of higher risk through physical or other barriers?

The area described in this application as Modified Accredited Advanced is the entire state of Michigan except counties in the Infected Zone and Surveillance Zone and the two counties presently designated as High Risk. (Attachment 14) The Infected Zone consists of Alcona, Alpena, Montmorency and Presque Isle Counties. The Surveillance Zone includes Cheboygan, Crawford, Iosco, Ogemaw, Oscoda, and Otsego Counties. The Disease Free Zone includes all counties outside the Infected and Surveillance Zones.

There are two reasonable alternatives for the southern border of the Surveillance Zone.

1. Use the political boundaries of the southern county borders of Ogemaw and Iosco Counties.
2. Use a natural boundary, which is further north in those counties with the Huron National Forest, the AuSable State Forest, and the AuSable River serving as a barrier for disease spread. This area is low density for both deer and livestock. The planted forest contains little deer forage. (Attachments 28 & 29) This would reduce testing and movement requirements for producers in southern Iosco and Ogemaw Counties. Neither deer nor cattle have been found positive south of that area. The southern boundary of the Surveillance Zone would be the boundary of the Huron National Forest from Lake Huron westward until it meets the boundary of the AuSable State Forest, westward to the Ogemaw County line. (Attachment 29)

   In addition, the Modified Accredited area will be bordered to the north by the Straits of Mackinac and to the east by Lake Huron. The western boundary is 50 miles from the Infected Zone.

The MDA Director may designate counties as High Risk upon diagnosis of an affected herd. High Risk counties will be tested annually for at least three years. On July 15, 2002, Oscoda County was designated High Risk. On July 18, 2002, two Emmet County herds were declared affected. In response Emmet County was designated High Risk effective July 22, 2002.

7. The extent to which movement of animals and animal products is controlled from regions of higher risk, and the level of biosecurity regarding such movements.

a. From what countries or regions does the requesting region import products that could potentially carry pest or disease agents of concern?

All cattle, goats, and bison must meet the following import requirements:

1) Originate directly from an accredited bovine tuberculosis free state as defined in 9 CFR, or
2) Originate directly from an accredited bovine tuberculosis free herd as defined in 9 CFR, or
3) Have a negative tuberculosis test within 60 days before importation.

b. To what extent is the movement of such products controlled from regions of higher risk, and what is the level of biosecurity regarding such movements.

The movement of animals is controlled by zoning. (Attachment 10) Movement of animal products is not relevant to spread of this disease.

c. What test procedures are used?

The caudal fold test is the first screening followed with comparative cervical and a gamma interferon in certain instances for all responders. Suspects, reactors, and exposed animals are moved to the laboratory or slaughter for diagnosis.

Official test procedures for bovine tuberculosis as stated in the appropriate UM&R are used. Caudal fold bovine tuberculosis tests for cattle and goats are conducted by licensed accredited veterinarians and by MDA and USDA regulatory veterinarians.

Michigan is doing whole herd testing with the gamma interferon bovigam test to validate the test under USAHA proposed guidelines. (Attachment 30)

Follow up comparative cervical bovine tuberculosis tests on "suspect" animals are conducted in accordance with the appropriate UM&R by MDA or USDA regulatory veterinarians.

d. Are animals quarantined that may carry the disease agent? If so, for how long and where?

Any animals, herd, or geographical area within this state or within a quarantined area of this state where bovine tuberculosis suspect or reactor animals are held would be kept under separate quarantines at that premises until the herd completes diagnostic and tuberculosis eradication procedures according to the appropriate UM&R. At that time the quarantine would be released. If bovine tuberculosis culture positive animals have been found, the premises would be appropriately cleaned and disinfected and remain under quarantine for the proper length of time according to the UM&R.

e. Are import permits and health certification required?

A permit for movement is required for all animals leaving any premises in the Infected or Surveillance Zone.

The MDA has received 1.3 million dollars in a two-year Cooperative Agreement from USDA for animal identification as it relates to tuberculosis eradication. MDA has entered into a grant agreement with the National Holstein Association to utilize it's Farm Animal Identification and Records (FAIR) system for tracking animal movement, maintaining herd inventory, and for official identification of livestock. Attachment 31 outlines this aggressive and innovative program that includes producer access to a web-based herd inventory and permitting system.

Testing veterinarians use handheld scanner/computer equipment to supply timely, accurate, and efficient data updates to the USDA, APHIS, VS Generic DataBase (GDB), MDA's Animal Industry Surveillance System (AISS), and the National Holstein Association FAIR database as herds are tested in the field. This ensures that animals may be traced for epidemiologic reasons and to identify marketing patterns that may contribute to disease spread.

Prior entry importation permits for cattle and goats coming into this state from other states are not required by the Animal Industry Act. An official interstate health certificate or official interstate certificate of veterinary inspection is required by the Animal Industry Act (Attachment 3) for all cattle, goats, and captive cervidae entering this state form another state.

f. What other procedures are used?

All procedures as required by 9 CFR and as outlined in the UM&R and zoning. (Attachment 10)

8. Livestock demographics and marketing practices in the region.

a. How many herds, flocks, etc. of each relevant species are in the region?

The Agricultural Statistics Region located in northeast Michigan includes 11 counties: Alcona, Alpena, Cheboygan, Crawford, Iosco, Presque Isle, Montmorency, Ogemaw, Oscoda, Otsego, and Roscommon. Of all the livestock in Michigan during 2000-01, it is estimated that northeast Michigan had over 5.7 percent of all cattle and calves, 5.2 percent of all milk cows, 8.8 percent of all beef cows, 4 percent of all sheep and lambs, and 0.2 percent of all hogs and pigs. Estimated livestock numbers by species are contained in Table 1.

Livestock Species	Michigan Total	NE Michigan Total	Five County Total
Cattle and calves	1,010,000	58,000	27,200
Milk cows	300,000	15,700	5,400
Beef cows	85,000	7,500	3,800
Sheep and lambs	71,000	2,900	Not published separately
Hogs and pigs	950,000	1,700	Not published separately
Elk	3,892	780	207
White-tailed deer	22,008	4,221	2,228
Other captive cervidae (est)	2,413	205	47

Table 1. Estimated livestock numbers by species in Michigan, Northeast Michigan and in the five counties where *M. bovis* has been identified in white-tailed deer, 1996-97 (Source: Cattle, sheep, and swine – Michigan Agricultural Statistics, 2000-01. MDA Captive cervidae database 6/02.

b. How are they distributed (e.g. herd density, etc.)

Among the counties in the five-county area, Alpena and Presque Isle have the most cattle, sheep and swine, followed by Alcona, Montmorency, and Oscoda (respectively). In general, herds are quite widely dispersed within the area, with farm-to-farm distance being usually at least one mile and often several miles.

c. What are the major marketing centers?

The major livestock marketing centers within the northeast Michigan region are located at Alpena (Alpena County) and Gaylord (Otsego County). Both of these sale yards are privately owned and operated.

A limited number of "special" livestock sales are conducted in the Northeast Michigan Region each year. For feeder cattle, these include a Michigan Livestock Exchange (MLE) cooperative sale at the Alpena sale yard during October and a few additional cooperative sales each fall at the Gaylord
yard. Alpena also hosts a lamb pool each October, as does a small sale (calf) yard in West Branch (Ogemaw County). In addition to lambs, the West Branch location hosts a registered beef bull sale each April which draws cattle and buyers from across Michigan.

Beyond these structured marketing channels, there are a certain number of herd dispersals and private livestock sales that occur each year. Market hogs are frequently sold directly to slaughter.

d. What are the patterns of livestock movement within the region?

Sales at livestock saleyards in this area are not restricted to livestock from the Northeast Michigan Region, and the Gaylord sale draws a substantial number of livestock from counties outside the proposed Modified Accredited area. A substantial number of livestock leave the area to other markets. Primary destinations include the Michigan Livestock Exchange (MLE) sale at Marion (Osceola County), Cass City (Tuscola County), and St. Louis (Gratiot County). These sales draw livestock from many counties. There are currently 29 licensed livestock auction markets and collection points throughout the state. (Attachment 32)

e. How are the animals transported and handled during market transactions?

There are two primary practices by which livestock are transported to and from the auction markets and saleyards. These animals may be transported directly from the premises of origin to the auction market or saleyard and then on to their new destination by the owners (seller and buyer) in vehicles owned and operated by the owners. Livestock may be transported by a relative or neighbor on occasion. Alternatively, livestock may be transported to and/or from the auction market or saleyard by livestock truckers in vehicles owned and operated by the livestock truckers.

If the latter is the case, livestock truckers for hire are required to be licensed with the Michigan Department of Agriculture in accordance with P.A. 284 of 1937, as amended, Licensing Livestock Dealers (Attachment 7) and to keep records in accordance with Regulation No. 138, Records Required of Livestock Dealers (Attachment 8). There are currently 298 licensed livestock dealers and/or truckers in the state.

Once transported to the auction market or saleyard, the livestock are unloaded at designated unloading docks. It is at this point that backtags are applied. The livestock are then sorted and penned according to the purpose for which they are intended, i.e. calves, feeder cattle, fat cattle, cull cows, bulls, etc. Handling of the livestock while in the confines of the auction market or saleyard is primarily by auction market or saleyard employees. The employees, under the direction of the saleyard manager, move the livestock through the alleys to the pens, from the pens to the sale ring, from the sale ring to pens (sorted to buyers) and finally to the loading docks (same as the unloading docks) to be loaded onto appropriate transport vehicles. Some livestock may remain penned at the auction market or saleyard until later in the evening when the trucker arrives. In these instances, the trucker will handle the animals during the load-out (pens to vehicle).

Most auction markets and saleyards have a schedule by which livestock of various intended uses are sold. For example, calves may be sold first and cull cows sold last. Livestock begin arriving early on the day of sale to assure they are present for the appropriate part of the sale. Some livestock may arrive during the night before the sale. In these instances, the consignor has usually made prior arrangements with the saleyard manager. Livestock are continuously arriving and departing throughout the sale day. Pens utilized early in the day will be used again later in the day to hold other livestock.

Livestock auction markets and saleyards are required to be licensed with the Michigan Department of Agriculture in accordance with Act No. 284 of 1937, as amended, Licensing Livestock Dealers (Attachment 7) and to keep records in accordance with Regulation No. 138, Records Required of Livestock Dealers (Attachment 8). There are requirements in this statute, as well as in P.A. 466 of 1987, as amended, the Animal Industry Act (Attachment 3), pertaining to the cleaning and disinfecting of the premises, and transportation vehicles.

MDA AID has program management responsibility for the licensing and regulation of livestock markets, dealers and truckers. License applications are reviewed by the program manager and processed by the appointed administrative support staff. Files are maintained on each licensee. The files contain license applications, bond documents (where applicable), inspection reports, complaint investigations and/or reports, correspondence, and other relevant documents. Seven veterinarians employed by the MDA, AID and four veterinarians and two animal health technicians employed by USDA, APHIS, VS conduct random inspections in the auctions markets and saleyards in their assigned territories. The main focus of the inspection process is to monitor animal welfare, conduct disease surveillance, and assure compliance with appropriate laws and regulations. Random inspections of livestock dealer records are also conducted. This is in addition to the enforcement of tuberculosis rules and regulations by assigned inspectors.

9. The type and extent of disease surveillance in the region--e.g., is it passive and/or active; what is the quantity and quality of sampling and testing?

a. Are serum surveys conducted, and if so, how frequently, what sample sizes are used, and what has been found?

Serum surveys are not applicable for surveillance and diagnosis of *Mycobacterium bovis*.

Active surveillance testing is completed by state or federal veterinarians, or private veterinary practitioners working under the direction of the MDA. All cattle and goats 6 months of age or older are tested using the caudal fold skin test. Any suspects to initial testing are immediately administered supplemental diagnostic testing by state or federal veterinarians as outlined in the

UM&R for Bovine Tuberculosis Eradication. Additional passive surveillance for tuberculosis is conducted through the USDA, FSIS inspection program. All cattle which originate within the five-county area and "buffer zone" that are slaughtered at a USDA, FSIS inspected slaughter facility are examined by USDA personnel for evidence of bovine tuberculosis.

b. Is reporting of sick animals mandatory, and if so, what is the procedure by whom and to whom, and what penalties are involved for failure to report?

M. bovis is a reportable disease in the state of Michigan. Under Public Act 466 of 1988, as amended, any person who has suspicion or knowledge of a reportable disease must immediately report that fact to the MDA. (Attachment 16) All reports of suspicion of disease or suspect tuberculosis test results are immediately assigned for follow-up to state or federal veterinarians trained in the diagnosis and control of tuberculosis, and diagnostic procedures followed as outlined in the appropriate UM&R.

Failure to report suspicion or knowledge of a reportable disease is a misdemeanor violation punishable by a fine of not less than $300.00 or imprisonment of not less than 30 days, or both. In addition, any person who intentionally misrepresents the health or medical status for an infectious, contagious or toxicological disease to facilitate movement or transfer of ownership is a felony violation punishable by a fine of up to $50,000.00 and imprisonment of up to 5 years. (Attachment 3)

c. Are laboratory tests run on suspicious animals? If so, what is the procedure and to what extent e.g., what proportion of suspicious cases are evaluated using each of the specific laboratory procedures.

All suspicious cases are followed up as deemed necessary by federal animal health officials, in conjunction with state animal health officials. All laboratory testing and follow up is completed in compliance with UM&R for Bovine Tuberculosis Eradication (cattle) or the UM&R for Tuberculosis Eradication in Cervidae (captive cervidae).

d. Are quarantines imposed on premises with suspicious cases pending final diagnosis?

All premises which contain animals suspicious for the presence of *M. bovis* are quarantined as determined necessary by federal animal health officials, in conjunction with state animal health officials. All quarantines are instituted in compliance with the UM&R for Bovine Tuberculosis Eradication (cattle) or the UM&R for Tuberculosis Eradication in Cervidae (captive cervidae).

e. What other procedures are followed regarding suspicious cases?

All procedures are followed as deemed appropriate by federal animal health officials, in conjunction with state animal health officials and MSU epidemiologists, and in compliance with the UM&R for Bovine Tuberculosis Eradication (cattle) or the UM&R for Tuberculosis Eradication in Cervidae (captive cervidae) to control the occurrence and spread of *M. bovis*.

10. Diagnostic laboratory capabilities.

a. What diagnostic laboratory capabilities are there?

AHDL

Animal diagnostic activities in the state of Michigan are handled primarily by the AHDL. The AHDL is a service unit of the College of Veterinary Medicine that is fully accredited by the American Association of Veterinary Laboratory Diagnosticians and offers expertise in bacteriology/mycology, endocrinology, epidemiology, nutrition, parasitology, pathology (biopsy and necropsy), toxicology, and virology/serology. AHDL services are available to veterinarians, regulatory officials, and animal owners, to assist in diagnosis and for consultation.

The AHDL examines sick or dead animals, animal tissues, blood and waste, feed, and samples from the environment. Its findings are coordinated with the referring veterinarian's clinical observations and animal histories in an effort to seek accurate diagnoses. The AHDL comprises 28 faculty members, over 60 technical, computer services and general support staff, and more than 40 part-time student employees. The operation occupies approximately 30,000 square feet.

MDCH LABORATORY

The MDCH Laboratory has capabilities to culture *M. bovis* and is a partner in cooperating state agency for the eradication of *M. bovis* in Michigan and are testing samples from cervids.

b. Are there laboratories approved for agent isolation, identification, and typing (if yes, need names and addresses of each)?

The MDCH Laboratory is USDA approved for *M. bovis* isolation, identification, and typing. The address of this laboratory is The Michigan Department of Community Health, Bureau of Laboratories, Division of Infectious Diseases, Microbiology Section, Mycobacteriology Unit, 3350 North Martin Luther King Boulevard, P.O. Box 30195, Lansing, Michigan 48909.

c. If not, where specifically is such isolation, identification, and typing done?

USDA's NVSL is the laboratory where all samples are sent for isolation, identification, and typing.

d. What security measures are in place in laboratories within the region to prevent escape of biological agents?

AHDL

AHDL laboratories operate in either Biosafety Level 1 or Level 2. In situations requiring Biosafety Level 3, laboratory personnel have access to the MSU biocontainment facility. Hazardous waste material, both chemical and infectious, is handled by MSU's Office of Radiation, Chemical and Biological Safety (ORCBS). This unit is responsible for establishing policies and procedures for
hazardous waste material according to state and federal laws and regulations. MSU is one of only a few universities licensed as a hazardous waste treatment storage and disposal facility by the Environmental Protection Agency.

The AHDL is in compliance with ORCBS regulations. Infectious waste generated in the bacteriology/mycology, virology/serology, and parasitology sections is collected in containers labeled "Biohazardous Material." The containers are transported by ORCBS for incineration. Discarded tissue waste from the toxicology section is packaged in hazardous waste containers and is also incinerated. All chemical waste from all laboratory sections, and radioactive waste, is packaged and stored according to ORCBS guidelines and is picked up and discarded.

All carcasses from the pathology service are incinerated on site. With respect to laboratory safety, all laboratory sections are inspected annually by ORCBS. Problems seen are reviewed by the internal AHDL Safety Committee, corrective action taken, and documentation provided to ORCBS.

e. What kind of training have the diagnostic personnel had regarding the specific disease agents of concern?

AHDL

Personnel are well qualified to carry out the AHDL's mission and now have a highly qualified TB expert on staff from the National Animal Disease Center.

11. Policies and infrastructure for animal disease control in the region--i.e., emergency response capacity.

a. What policies and infrastructure exist for emergency response to outbreak situations?

The infrastructure for control of bovine tuberculosis is provided by parts 50 and 77 of the 9 CFR and UM&R for eradication of bovine tuberculosis. State statute, specifically Public Act No. 466, as amended, the Animal Industry Act, (Attachment 3) provides the statutory authority to implement animal disease control in the region.

The Animal Industry Division of the Michigan Department of Agriculture has an Emergency Response Plan (Attachment 33) for all diseases of livestock concern. This generic plan has been exercised and is part of the overall Michigan Emergency Response Plan.